

A NORTHERN FORM OF THE BUTTERFLY NEONYMPHA AREOLATUS

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In the "Catalogue of Diurnal Lepidoptera Described by Fabricius in the Collection of the British Museum" by Arthur G. Butler, London, 1869, two butterflies by the name of "*Papilio Phocion*" are mentioned. One was described in 1781 and the other in 1793. In *Species Insectorum* 2., p. 138, n. 642 (1781), Fabricius described a butterfly from Africa which Butler figures on his plate iii and credits to Sierra Leone. He further states on page 274: "Two wings of the type still remain in the Banksian Collection; *P. Phocion* is figured in Jones's unpublished 'Icones'. Fabricius described three Hesperidæ under this name."

In *Entomologia Systematica* iii, p. 218, n. 683 (1793), Fabricius described the second *Papilio phocion* from an unknown locality. Butler, however, on page 15 of the work already cited, gives "United States" as the locality. In his "Catalogue of the Diurnal Lepidoptera of the family Satyridæ in the collection of the British Museum," London, 1868, he also mentions the United States as locality for this butterfly. Samuel H. Scudder in "The Butterflies of the Eastern United States and Canada" (1889), likewise dates the American *phocion* from 1793, and not 1781, as has been done by most authors. In "The Butterflies of North America," 3rd series, 1897, Wm. H. Edwards, for instance, cites the 1781 description by Fabricius of the African butterfly, and then translates the 1793 description, the one supposed to cover our North American species. Edwards, however, considered that the description itself was "inapplicable", and used the name *areolatus* given the insect under consideration by Abbot and Smith in 1797.

It is also the opinion of the writer that *phocion* is inapplicable, not for the reason given by Edwards, but because in 1793, when Fabricius named his second *Papilio phocion*, he used a preoccupied name.

We still have to consider the name *Oreas fimbriata helicta* given to the insect under consideration by Jacob Hubner in *Sammlung exotischer Schmetterlinge*, 1806. There is no description, but his plate shows an insect with lines and spots about as in figure 3 on the plate accompanying this article; that is the two brown lines extending across the central portion of each hind wing approach each other and are almost connected. This seems to be a rather uncommon variation, of which the writer has but the single example here figured. In his *Verzeichniss bekannter Schmettlinge*, 1816, p. 65, he states under number 622 "*Neonympha Helicta*. *Areolatus* Abbot. Lepid. 13 Hubn. *Oread fimb. Helicta*."

Turning then to "The Natural History of the Rarer Lepidopterous Insects of Georgia", by Abbot and Smith, we find figured on plate 13 three specimens of *areolatus*; two figures of the upper side and one of the lower. This last shows four round blackish spots encircled by yellow on each fore wing, and six elongate spots encircled by yellowish on each hind wing. The spots on the hind wing are of the shape of those shown in figures 1 and 2 on the plate accompanying this article.

Boisduval and Le Conte in *Lep. Am.* Sept., 1833, plate 63. show the spots as elongate on the underside of the hind wings in *areolatus*. Samuel H. Scudder in "The Butterflies of the Eastern United States and Canada" (1889) shows on plate 14 a *phocion* from Georgia with five elongate spots on the underside of the hind wings. Wm. H. Edwards in "The Butterflies of North America", 3rd series, 1897, shows the underside of *areolatus* in figures 2, 4, and 5. Figure 2 shows long spots; 4 with slightly more rounded spots, and figure 5 a variation having a reddish colored line surrounding the spots. In Holland's "Butterfly Book", plate 25, figure 7, there is a colored figure of the underside of a *phocion* showing elongate spots.

Many years ago the writer observed that the numerous specimens of *Neonympha areolatus* Abbot and Smith, that he collected at Lakehurst, New Jersey, had the eye-like spots on the underside of the hind wings rounder than in specimens coming from Florida and the south in general. He at the time communicated this fact to Mr. Frank E. Watson, now of the American

Museum of Natural History, who kindly compared the specimens at hand and confirmed the observation as far as could be done at the time. Comparing at the present time 22 specimens from New Jersey, 6 from Raleigh, North Carolina, 1 from Southern Pines, N. C., 3 from Charleston, South Carolina, 17 from Florida and 1 from Harris Co., Texas, the observation made as stated above is again confirmed, and it is also found that the yellow encircling the blue of the eye-like spots is lighter in color in the southern specimens than in those from New Jersey. Further in Entomological News, Vol. XIV, p. 297, Nov., 1903, Mr. Philip Laurent in "Notes on the Butterflies of Miami, Florida", makes the following statement: "*Neonympha phocion* differs from our northern examples, in the fact that the anterior wings are not as much produced, besides there are other characters which at once will enable the student to separate the southern specimens from the northern." According to our observation, northern specimens have the outer margin of the fore wing somewhat more rounded or curved than in those from the south. Perhaps this is equivalent to stating that the latter is more produced.

The northern specimens appear therefore to be separable as a variety or race from the southern ones, and the name *septentrionalis* is here proposed for it. Type specimen from Lakehurst, N. J. (July), figured as number 4 on the accompanying plate.

The writer does not mean to imply that specimens of *areolatus* from New Jersey and vicinity may not occasionally show spots resembling those from Florida and Georgia. He simply wishes to point out that there is a rather constant difference between those from the north and south.

EXPLANATION OF PLATE X.

Fig. 1, *Neonympha areolatus*, Abbot and Smith, Lakeland, Fla., May 8, 1912.

Fig. 2, *Neonympha areolatus*, Lakeland, Fla., April 13, 1912.

Fig. 3, *Neonympha areolatus* (*helicta* Hubner), Southern Pines, N. C., June 13, 1920.

Fig. 4, *Neonympha areolatus*, var. *septentrionalis*, Lakehurst, N. J. July. Type.